

## What are the treatment options for HCC?

*(continued from inner panels)*

**Injection:** Ethanol injection kills tumor cells by drying them out. It is often used when the tumor cannot be removed surgically. Injection of ethanol is most useful in patients with smaller tumors.\*

**Cryosurgery:** This procedure involves freezing the tumor tissue using liquid nitrogen. It is often used when surgery is not an option. Cryosurgery is most beneficial in patients with smaller tumors.\*

**Chemotherapy:** This treatment is designed to stop the production of cancer cells using a variety of powerful chemicals. Chemotherapy interrupts the life cycle of cells and stops cells from growing. These drugs all have heavy side effects and may result in tumor shrinkage of up to twenty percent.\*

**Immunotherapy:** Using the body's natural defenses to fight cancer is called immunotherapy.

*\*Indicates a palliative treatment, which is designed to provide relief but not a cure. There is currently no cure for HCC.*

## What can I do if I have HCC?

- Discuss with your doctor the advantages, disadvantages and side effects of the treatment options available to you.
- Ask your doctor about the possibility of using experimental therapies and eligibility to participate in clinical trials.
- Visit [www.bluefaery.org](http://www.bluefaery.org) for valuable information and resources.



### Blue Faery: The Adrienne Wilson Liver Cancer Association

is a nonprofit organization whose mission is to prevent, treat, and cure primary liver cancer, specifically Hepatocellular Carcinoma (HCC), through research, education, and advocacy.

[www.bluefaery.org](http://www.bluefaery.org)

#### Sources:

National Cancer Institute, World Health Organization, Hepatitis B Foundation, American Joint Committee on Cancer, Centers for Disease Control, and the Mayo Clinic.

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*What you need to know about*

## LIVER CANCER

**(Hepatocellular Carcinoma)**



**Blue Faery**  
The Adrienne Wilson Liver Cancer Association

## What is Hepatocellular Carcinoma?

Hepatocellular Carcinoma is the 4th most common cancer in the world. It is also known as HCC, hepatoma, primary liver cell carcinoma, or primary liver cancer. HCC is cancer that arises from hepatocytes, the major cell type of the liver.

### What causes HCC?

The most common contributing factors towards the development of HCC include viral hepatitis (especially hepatitis B and hepatitis C). Other factors include cirrhosis, hemochromatosis, and aflatoxins.

### What are the symptoms of HCC?

Symptoms include abdominal pain or tenderness (particularly in the right-upper part of the abdomen), an enlarged abdomen, pain in the right shoulder, bloating, decreased appetite, nausea, unexplained weight loss, and unexplained fevers. Jaundice and swelling of the legs can occur in more advanced liver cancer. Many patients with HCC do not develop symptoms until the advanced stages of the tumor.

### How is HCC diagnosed?

- A physical examination shows an enlarged, tender liver.
- An abdominal CT scan reveals a mass in the liver.
- A liver scan indicates an abnormality.
- A liver function test indicates that liver enzymes are elevated.
- Serum alpha-fetoprotein is elevated.
- A liver biopsy shows HCC.

## What are the stages of HCC?

Stage I: The tumor is any size but does not invade blood vessels.

Stage II: There is a single tumor (any size) that does invade blood vessels, or there are several tumors, and all are less than 5 cm in diameter.

Stage IIIA: There are several tumors, and at least one is larger than 5 cm in diameter, or a tumor invades a branch of the major liver blood vessels (portal vein or hepatic vein).

Stage IIIB: A tumor invades a nearby organ (other than the gallbladder) or a tumor has penetrated the lining of the liver.

Stage IIIC: The cancer has invaded nearby lymph nodes. (Tumors can be any size or number.)

Stage IV: The cancer has spread to other parts of the body, i.e. the lungs, bones, etc. (Tumors can be any size or number, and nearby lymph nodes may or may not be involved.)

### What are the treatment options for HCC?

**Liver transplant:** Surgery in which a donor provides a new liver or partial liver to replace a diseased liver in another. This complicated procedure is usually recommended for Stage I patients. Sometimes other treatments, such as chemoembolization, radiofrequency ablation, and cryosurgery, will be administered pre-transplantation in order to shrink tumors. It is possible for tumors to re-grow in the liver.

**Resection:** Surgery that involves the removal of damaged tissue or entire portions of the liver. Many patients are not candidates for resection. In most cases, cancer must not have spread to other parts of the body in order to perform resection. Similar to liver transplantation, other treatments may be administered before resection in order to shrink tumors.

**Radio frequency ablation:** A procedure that destroys liver tumors approximately 4 cm and smaller by heating them to temperatures between 80 and 100 degrees C using a needle and electrical current. This treatment may be used before and after surgical options to improve patient outcome.\*

**Chemoembolization:** Treatment in which chemotherapy drugs are administered into the liver tumor through the hepatic artery. This procedure is usually beneficial in patients that have tumors limited to the liver. Chemoembolization can also be used to decrease the size of tumors to make surgical options possible.\*

**Radiosurgery:** A treatment that delivers radiation directly to liver tumors in a surgical setting. Tumors are destroyed without damaging surrounding tissue. A common tool used to perform this surgery is called CyberKnife.\*

**Theraspheres:** These microscopic glass beads are filled with radioactive elements. The beads deliver radiation directly to liver tumors through a small needle. This procedure is often used in patients that are not candidates for resection.\*

*\*Indicates a palliative treatment, which is designed to provide relief but not a cure. There is currently no cure for HCC.*



## Statistics

- HCC accounts for approximately 84% of all liver cancers.
- In the United States, there will be over 19,000 new cases of HCC this year. Worldwide, there are 1 million new cases each year.
- The five-year survival rate for patients with HCC is 2% – 6%.
- 70%-95% of patients with HCC have a history of hepatitis B or hepatitis C.
- Over 1.2 million people in the United States and 400 million people in the world have hepatitis B.
- Over 4 million people in the United States and 170 million people in the world have hepatitis C.
- 60%-80% of people with HCC also have cirrhosis.

Ranges were included when the statistics were highly variant depending upon the source. Since there is little research devoted to HCC, most HCC statistics are also based on incredibly small populations.



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## What about clinical trials?

Clinical trials are studies conducted using investigational treatments or methods on volunteers. Eligibility for clinical trials depends on many factors, and the decision to enroll should be based on concrete information.

For more information about clinical trials and to search for current liver cancer clinical trials in your area, visit:

[www.clinicaltrials.gov](http://www.clinicaltrials.gov)

## Where can I go with questions about HCC?

Your doctor and healthcare providers can often provide the best information concerning your treatment. Blue Faery also provides support to patients and their families. Please contact us:

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